

CLAIMS

1. A composition consisting of a semi interpenetrating network, which comprises at least one crosslinked water soluble derivative of a basic polysaccharide, which has primary and/or secondary amine groups, and a non crosslinked component, which comprises at least one anionic polysaccharide, wherein the anionic polysaccharide resides within the semi interpenetrating polymer network.
2. A composition as claimed in claim 1 wherein the water soluble basic polysaccharide is chitosan or a derivative thereof.
3. A composition as claimed in claim 2 wherein the basic polysaccharide is deacetylated chitin, re-acetylated chitosan, N-Carboxy methyl chitosan, O-Carboxy methyl chitosan or O-Hydroxy ethyl chitosan.
4. A composition as claimed in claim 3 wherein the partially N-acetylated chitosan has a degree of deacetylation in the range of 45% to 55%.
5. A composition as claimed in any one of claims 1 to 4 wherein the non crosslinked component is hyaluronic acid.
6. A composition as claimed in any one of claims 1 to 5 wherein the composition also includes one or other anionic polysaccharide components of the extra cellular matrix.
7. A method for the preparation of a composition as defined in any one of claims 1 to 6 which comprises crosslinking at least one water soluble derivative of a basic polysaccharide containing primary and/or secondary amine groups, in the presence of at least one anionic polysaccharide, under conditions which avoid protonation of said primary or secondary amine groups and which also avoid reaction of hydroxyl groups or any other functional group on the anionic polysaccharide.
8. A method as claimed in claim 6 wherein the crosslinking reaction is performed under neutral or slightly alkaline conditions, pH range 7 to 8.

9. A method as claimed in claim 8 wherein the crosslinking reaction is carried out at a pH around 7.
10. A biomaterial comprising a composition as defined in any one of claims 1 to 6.
11. The use of a composition as defined in any one of claims 1 to 6 or a biomaterial as defined in claim 10 in medicine.
12. The use of a composition as defined in any one of claims 1 to 6 in the preparation of a biomaterial.
13. The use as claimed in claim 12 wherein the biomaterial is for use in dermatology, plastic surgery, urology and in the field of orthopaedics.
14. The use as claimed in claim 13 wherein the biomaterial is formed into a thin film, sponge, hydrogel, thread or non-woven matrix.